

Z88 EPROM

MAY/JUNE 1989

VOL.3 NO.3

<u>CONTENTS</u>	<u>PAGE</u>
Club Addresses	2
Editorial	2
Members' Special Offer	5
Newslines	5
Members' Letters	7
Queries, Hints & Tips	9
Club Workshop Review	11
Software Review - Stopwatches	13
Astra versus BSB	15
Book Review - Z88 Computing	20
Crossword	31
BASIC for Beginners	32
Accessory Review - The Cambridge Topper	37
Software Library Update	38
Small Ads	43

The Z88 Users' Club Magazine

THE CLUB ADDRESSES

All articles for Z88 EPROM and any other correspondence (except Software Library) should be sent to:

Z88 USERS' CLUB
68 WELLINGTON STREET
LONG EATON
NOTTINGHAM
NG10 4NG

All requests for software from the Club Software Library, (but not special offers), items for inclusion in the Library, and EPROMs for erasure should be sent to:

THE SOFTWARE LIBRARY
Z88 USERS' CLUB
3/8 JENNER ROAD
GUILDFORD
SURREY
GU1 3PL

ALWAYS include your Membership Number with any correspondence. This is not just to be awkward - now the Club is growing it can be very time-consuming searching the database for a member's number. Your number is printed on the address label of each issue of Z88 EPROM. Please be sure to enclose a stamped-addressed envelope with anything needing a reply.

EDITORIAL

Here we are again with another issue of your favourite (the only?) Z88 magazine. You may have noticed that this issue is back to being printed in 10 pitch, rather than the smaller 12 pitch of the last few issues. This is a temporary state of

affairs caused by the demise of my trusty Ricoh daisywheel printer, the only one I have which will print in 12 pitch. We will be back with 10 pitch for this issue only, and in order to compensate for the larger type there are a few extra pages in this issue. Next time, we will be back to our normal 36 pages, but with a very dramatic change in the way Z88 EPROM is presented - I will say no more at this stage, and leave you on the edge of your seats!

In the centre of this issue you will find our first Members' Survey - a four page pull-out questionnaire designed to find out what you think about the Club and Z88 EPROM and how they can be improved. Please take a few minutes to fill it in - your views are valuable. I realise that you have got to provide an envelope and a stamp to return it, but isn't 14p a worthwhile investment in the future of the Club! As a small incentive to return the Survey, there are TEN prizes in a lucky draw - the first ten forms pulled out of the hat on 25th June will each get 6 FREE issues of Z88 EPROM. Details of the prize winners will be in the next issue.

During the last few months the Club has undergone a tremendous expansion, much of which is thanks to Cambridge Computer. A couple of months ago CCL gave me a set of labels which were the details of people who had bought the machine by mail order. I have gradually been sending Club information to these people, and have had a quite phenomenal return rate of over 30%. Apologies if any of you have received a mailshot - despite checking the labels for existing members, some duplication is inevitable.

This boost in membership has of course meant a lot of extra admin work, so I would apologise now if you have written to the Club and had to wait a long time for a reply, or indeed if you are still waiting. Unfortunately, there are only 24 hours in a day, and in time the extra work will tail off. Just to give you some idea of the increase, the amount of mail coming in has escalated from an average 50 items a week up to about 150 items!

The Club Workshop on 1st April was widely considered to be a success by those who attended. It was rather unfortunate that such a small number of you could attend - about 45 people - which meant that the cost of the day was not covered by the ticket charges. The event lost about £125.

While the obvious success of the event tells me that it should be repeated, future events would need to be attended by many more people to be viable. To this end there are a number of questions pertaining to Workshops in the pull-out questionnaire.

One of the most common requests I get from members asks for details of any other members within their locality. There are two problems in supplying this sort of data - primarily the fact that the Club database is registered with the Data Protection Registrar, and the terms of reference prohibit passing on personal details without the express permission of the person involved. The answer is this: If you want details of other users nearby, simply write to me with details of a contact small ad, asking members living in your vicinity to contact you by 'phone or letter. As with all small ads, the service is free to members.

MEMBERS' SPECIAL OFFER - Z88 COMPUTING BOOK

This special offer saves £2 off the publisher's price of **Z88 Computing** - see page 5 for a full review of the book, which normally costs £9.95. The Special Offer is **only** available to Club Members, and the finishing date for the offer is **30th June 1989**.

Members wishing to purchase a copy should send £7.95 plus 50p for post and packing (total £8.45) to: David Fulton Publishers
2 Barbon Close
Great Ormond Street
London WC1N 3JX.

You MUST quote your Membership Number.

If you wish to call at the office for a copy, telephone first on 01 405 5606.

NEWSLINES

** TK COMPUTERWARE are importing a disk drive system for the Z88. Details at the time of writing are almost non-existent, but the unit is being imported from America, and will be a battery powered 3.5" drive giving 200k of storage per disk. Price is also very much an unknown quantity at the moment, but expect around £250-£300. By the time you read this TK may have the units for sale, so if you are interested contact them on 0303 812801, fax 0303 812892, or mail at Stone Street, North Stanford, Ashford, Kent, TN25 6DF.

** RANGER COMPUTERS, the official corporate distributor for the Z88, are working on a disk drive system with Crystal Electronics. Based around a 5.25" drive, the unit will be battery powered and will offer a simple complete backup of the whole Z88 RAM to disk, and another command to

load a disk into the Z88. The software is being kept simple like this as many of the corporate users are not computer literate, and Ranger see the need to keep the unit simple to operate paramount. Because the unit is aimed at large corporate users, this is reflected in the price - not yet fixed, but expected to be around £450+. Details from Ranger Computers at The Innovation Centre, Boughton Green Road, Moulton Park, Northampton. NN2 7AH. Tel: 0604 791064.

** CAMBRIDGE COMPUTER have announced details of retail and distribution agreements for the new satellite receivers. Comet will be selling the system in their 312 retail outlets, with distribution to independent retailers being through three outlets: Micro-X in Neasden, Micro-Peripherals in Basingstoke and Clyde Factors in Scotland. The new systems will be available in early May in two configurations: System II, consisting of dish, set-top receiver, remote control and stereo output for £199.95, and System III for all the above plus a 6 watts per channel stereo amplifier for £259.95. There has been no announcement regarding the base level System I - obviously CCL expect the interest to be in the higher models initially, and are concentrating their production efforts accordingly.

** FRONT LINE COMPUTERS have released a program for the Z88 called Event Control System. This is a database/timing program designed for multiple competitors each with a single time. The idea for the program came from Stan Sutherland, who is a commentator and timekeeper on the RAC Rally. The Event Control System is complementary to the Stopwatches program reviewed on page 13, as this offers multiple times for fewer competitors. Mark

Hall at Front Line is on 0203 344651.

** COMPUTER CONCEPTS have released a version of their Spellmaster spelling checker for the American market. The program features a modified dictionary with U.S. spellings, and retails at the same price as the U.K. product - £59.00 including VAT. Details from Computer Concepts at Gaddesden Place, Hemel Hempstead, Herts HP2 6EX.

** AT THE recent Cable and Satellite Show where the 60cm dish and receiver were exhibited, CCL also announced a further satellite product - a 45cm mini Astra dish. Just 12.5cm deep, this new flat dish will be available from this Autumn, and will work in the Midlands and the South of England. This smaller dish has been made possible because the original 60cm design turned out to be over-engineered when Astra started transmitting; the dish being more efficient than expected. The new 45cm dish will be available with the same receivers and at the same price as the 60cm sets.

** HARVESTER Information Systems have released their three Z88 software applications - the Harvester Wordchip, a 128k spell checker with a 70,000 word Collins dictionary (£49.99); the Finger Organiser typing tutor (£39.99) and the Data Organiser database (£49.99). All three were shown for the first time at the recent Northern Sinclair Show organised by Sector Software.

MEMBERS' LETTERS

Alastair Scott (1138)

Dear Roy,

I don't like to be the bringer of bad tidings, particularly as this is only my second letter to you, but I fear we are about to see the demise of the Z88 from the market place.

Following the failure of the QL, I am sure that I was not alone in the belief that Sir Clive was not going to let the same thing happen twice. However here we are a quarter of the way into 1989 and I have been told by two branches of Dixons that they are discontinuing this line (mind, you to be blunt they seemed fairly blase about it from the start), though they never had a respectable range of accessories for the Z88 anyway.

Now don't get me wrong, I am not blaming Dixons for the failure of Cambridge Computers new baby to take off in the portable computer market place. I think blame can fall on CC's fairly weak, (I'm going to get into trouble for this), at least in my opinion, marketing policy. Let's take a trip back in time to the days of the ZX80,81, a computer which many of us cut our teeth on in the realms of programming and the mysteries of machine code. We all remember how it took off in a big way, too big maybe for Sinclair who I think had problems in supplying accessories (Oh that wonderful 16k RAM pack!). It was advertised extensively in various magazines and the rest, as we know, is history - one knighthood and a C5 later, here we are again in a strangely familar situation, yet at the other extreme. I couldn't even try to guess what the future holds for the Z88, I do not know anyone else personally who owns a little black beastie.

Perhaps we could persuade Richard Russell to do an MS-DOS pack (or even Z88-DOS version) and then get Cambridge Computers to get their act together, with marketing, advertising, and an in-store demo-chip to show what is otherwise an excellent package, and deserves far better exposure than it has received in the past.

That's it, I've had my moan and got a lot off my chest and will leave you with this bit of good news: If you live in the Milton Keynes area and want a Z88, John Lewis' have them in stock and even have a selection of printer cables! The only catch is that they are not on display, being in a locked wooden cabinet in their computer department, and I had to specifically ask if they sold it as I was after a serial printer cable.

QUERIES, HINTS AND TIPS

Paul Bridle (0544)

I am finding that the key for the character 'E' often does not respond while I am typing. Some of the other keys miss occasionally but the 'E' is the worst offender. Is this a common problem? Can it be easily resolved?

(This sounds to me almost certainly a symptom of a failing keymat. Another common symptom is difficulty in switching on the machine using the two shift keys. The cure is a replacement keymat, and yes, unfortunately it does seem to be quite a common problem. - Roy)

Michael Gilmore (1525)

I was interested in Simon Phipps software fault list as I also have had problems with continuous underlining. I use a Brother M1509 printer at work and have been unable to get continuous underlining with any combination of the codes, and have had to resort to using backspacing (?,BS,"_") which produces a broken underline and needs a _ instead of a space. The handbook says that 27,"-",1 should work. The infuriating thing is that I get continuous underlining with enlarged script using 27,"!",156. If any member can suggest a cure, I will be most pleased.

Warren Newman (0228)

I currently have a 128k RAM in slot 1, a 32k Z-Term ROM in slot 2, and a Spellmaster ROM in slot 3. Would it be possible to copy either of the EPROM based software onto a 128k EPROM in order to have the use of slot 3 for EPROMs without changing cards?

(The short answer is no, it is not possible to copy ROM software from EPROM to EPROM. It is possible, for example with Wordmongers packages, to part exchange several 32k programs and have them all supplied on one 128K device, but this is limited to software from the same supplier. - Roy)

Christopher Wightwick (1043)

A short but useful addition to the BASIC command *NAME, to mimic the BASIC V facility

```
10 REM >Filename which automatically SAVES  
"Filename" without your having to type it in each  
time.
```

If you start your program as shown below and RUN these two lines at least once, then SAVE \$\$% will SAVE "Filename" at any time without your having re-type it. In line 20: parts between braces {...} are optional; r is any RAM; any static variable will do instead of S%, but it must not be used elsewhere in your program.

```
10 *NAME (:RAM.r/)Filename(.ext)  
20 S%=PAGE:REPEAT:S%=S%+1:UNTIL LEFT$(S%,5)=  
   "*NAME":S%=S%+6
```

Michael Finch (1040)

Can any reader of Z88 EPROM help me with this problem:

I am trying to write an EXECUTE/CLI file which will link my Z88 to Prestel (using the 1200P modem and COMM88 software) and then access and

save several pre-chosen Prestel pages, and finally disconnect when finished. Hopefully this could be done automatically using the Alarm facility.

However, I can get no further than the modem dialling out. I have experimented with various .D settings, but it seems as if the subsequent keys input from the CLI to access the Prestel pages seem to interfere with COMM88's ability to accept the carrier signal from the modem, and the Z88 will not log on to Prestel. Any suggestions would be gratefully received.

CLUB WORKSHOP REVIEW - SAT 1st APRIL

By Dr Chris Carter (0688)

Firstly I must thank Roy for organising this first Club Workshop. The organisation was indeed excellent. Roy told me afterwards that it didn't take even as much effort as getting an issue of Z88 EPROM out. This to me indicates the amount of effort this takes, rather than the smallness of the effort involved in the organisation of the Workshop!

Unlike some 'professional' seminars I have attended (costing some £200 per day against Roy's incredible £8!), the whole thing ran like clockwork with every speaker sticking to his allotted time and a number of extra speakers being slotted in at the last minute.

I had allowed one and a half hours from Sheffield. In the event the venue was just off the motorway and thanks to Roy's excellent map (my brother Dave's excellent map, actually! - Roy) was dead easy to find. My journey only took half the time I had allowed.

At the end of the day we were asked to fill in a questionnaire and suggest ways in which the event could have been improved. Usually, being a lecturer myself, and perhaps a bit over-critical, I can find a host of things to pick fault with. On this occasion I found myself lost for words. No illegible OHPs, all speakers audible, no time wasters, all tastes catered for (particularly at the excellent buffet lunch!), time to chat to other delegates, nametags to break the ice and special interest groups.

Unlucky Cambridge Computers are so thin on the ground that they had to cancel their attendance at this event at the last minute. As far as I am aware the Club is the only catalyst for the Z88 and the main source of support for the private user. Where was CCL? Off developing the next product, perhaps? The Z88 is a great machine and has got a small but excellent software base; if only the manufacturer would support it!

It has not been possible to cover all the firms who attended, and these notes reflect only my own interests, and don't cover what I learned. Perhaps the best bit was the sheer enthusiasm and getting to meet like-minded souls.

Thank you to all the companies who attended. I don't suppose you covered your expenses, but there is more to business than making a profit, and I for one will be spending more with you in the longer term. A very big thank you to Roy for organising the event (proud to have met you, Roy) and to Ian our dedicated and hard working librarian. When I see the amount of time that you put into the Club it makes me glad to be a fellow Z88 user.

SOFTWARE REVIEW - STOPWATCHES

BY RACING CAR COMPUTERS

This Stopwatches package has been around for some time, and might be considered one of the more specialised software applications for the Z88. The program makes the Z88 useful for many types of timing applications; examples cited in the manual including athletics, timing laboratory experiments or offshore races, or measuring the elapsed time between astronomical photographs. However, looking at the name of the company selling Stopwatches you will be left with no doubt what it was originally designed for: Car racing.

The package comes on a 32k EPROM together with a 22 page A4 manual, a self-adhesive keystrip, and a rather attractive car sticker advertising Racing Car Computers!

Once installed, Stopwatches provides you with 14 clocks - if you require more than this number you can of course create further Stopwatch applications, and switch between them using Q.

Assuming that each clock was for a separate competitor, each can be identified with two strings, called the name and number. Once you have entered the details of your 14 competitors, or loaded them from a previously created file, there is an option to set a minimum lap time for all competitors. Setting a suitable minimum lap time will effectively block any accidental keypresses or double entries.

There are three modes of operation, depending on the type of event you are timing: Practice Mode

displays the best lap time, and the position is calculated on the basis of the shortest lap first and longest last. Race Mode relates all times and positions to the current leader.

In Endurance Mode the time/distance is calculated on the competitor immediately ahead. Therefore switching between Race and Endurance Mode will give information on a competitor's position relative to both the leader and the competitor in front.

The display is very effective: It shows the two identifiers for each clock, the current lap time to the nearest second, the last recorded lap time and best recorded lap time or time behind the leader (each to 100th of a second), the position of each competitor and finally the number of laps completed.

The clocks are controlled by the 14 keys (excluding ESC) on the top row of the keyboard, and this is where the self-adhesive keystick comes in - it has a wipe-clean surface and can be used to identify clearly which key controls the clock for which competitor. One press of a key will start that particular clock; subsequent presses record a lap time for that clock.

There are commands to start and reset all clocks at once, and to reset best times. There is also the useful facility of taking a snapshot of the state of all competitors at any point in time - \diamond SNAP produces a PipeDream compatible file called SNAPxx.xx where xx.xx is the time in hours and minutes when the snapshot was taken. The snapshots can then be loaded into PipeDream for viewing or printing.

The clever part for me is the fact that once the clocks have been started, the Z88 can be used for other applications, or even switched off, and when you return to the application the stopwatches are all automatically updated.

So far in this review I have dealt with the standard version of Stopwatches. There is also an enhanced version called the Racing School version, which as well as encompassing all within the basic version, will also allow you to log each competitor's lap times, and view or print out these logs.

Stopwatches is a specialised application, which is only of use if you have a specific application for it. In view of this limited market, the package must be viewed as being extremely good value. My only gripe is that the manual has no contents table, index or even page numbers!

PRODUCT: Stopwatches

PRICE : Standard version £49.50
Lap Log Version £69.50

FROM: Racing Car Computers, 1 Mulberry Cottage,
Tye Green, Elsenham, Bishop's Stortford,
Herts. CM22 6DZ. Tel:0279 812496

ASTRA VERSUS B.S.B. -

THE BATTLE OF THE SATELLITES

by Ian Bullas, our Satellite Correspondent

By the time you read this the first satellite receivers from CCL should be in the shops. They are specifically designed to receive current and

future broadcasts from the pan-European Astra satellites. There will be a full review of the receiver as soon as one is available, but in the meantime, following on from Roy's brief resume of the channels available on Astra in Vol.3 No.1, I intend here to look a little more closely at what is on offer, and compare that to the package planned by British Satellite Broadcasting (BSB), whose satellite is due to be launched in August.

Astra 1a

This is the first of three Astra satellites and is already broadcasting. It has capacity for 16 TV channels, although not all of them can be seen in Britain. Astra 1b has already been made, and will be launched in 1990 with another 16 channels. Astra 1c is planned for launch in 1991 or 1992, which would then offer a total of 48 channels, as long as the receiver has enough channel capacity and covers the right wavelengths, which the CCL unit does. Let's look in more detail at one or two of the channels on offer:

Sky Channel

Media tycoon Rupert Murdoch owns and operates six channels on Astra, under the banner of Sky Television. The flagship service is called Sky Channel, and provides a mix of light entertainment, chat shows, older films and TV movies. There are also a few more serious programs: "Beyond 2000" is an Australian Tomorrow's World and "Frank Bough's World" is a showcase for some outstanding documentaries from around the World.

Sky News

24 Hour news channel with a full half-hour news programme every hour on the hour. Presented by ex-BBC and ITN journalists. The other half hour

is taken up with interview shows, features and even live news bulletins from NBC in America.

Euro-Sport

Owned jointly by Sky and the European Broadcasting Union. An all sports channel featuring mainly European events.

Sky Arts

Due on the air in the Autumn, Sky Arts will feature ballet, opera, painting, classical music and perhaps "classic" movies.

Sky Movies

The "first-run" movie channel showing films never before shown on t.v. Deals with Hollywood film companies Disney/Touchstone, Orion, Warner Bros. and Murdoch's own 20th Century Fox guarantee a good supply of films. The service is free at the moment, but will be scrambled at the end of the year when a subscription will be charged.

The Disney Channel

Due on the air this summer, the daytime schedule will include all the Disney favourites. In the evening films, mini-series, documentaries and concerts - all free of commercials. Again later in the year there will be a monthly charge presently quoted at £12 per month for both The Disney Channel and Sky Movies.

Lifestyle

The first of two channels on Astra owned by WH Smith Television. At the moment only broadcasting in the morning and early afternoon. Programmes are mainly aimed at women and include soaps, game shows, cooking and chat shows.

Screensport

The second WH Smith channel is also the second all sports channel on Astra. At the moment mainly sports from America. Currently both Lifestyle and Screensport are free, but a subscription may be charged later in the year. WH Smith also plan to

switch transmission from the PAL system to D-MAC later in the year. Whether people will be willing to buy a decoder and pay a subscription for what were previously free channels remains to be seen.

MTV

24 Hour pop and rock music station modelled on MTV of America. The pop videos are supplemented by interviews, concert guides and film reviews.

The Children's Channel

Broadcasting mornings only at the moment, and featuring cartoons drama and magic shows. Some programs are educational as well as entertaining.

The Landscape Channel

A very original concept, unlike any other channel. Instrumental music, both classical and modern are put together with soothing images of sunsets, sea shores, country landscapes etc. resulting in a very pleasing combination. Instead of carrying advertising, at the end of each piece viewers are able to order a recording of the music used. That, for the time being, is the line-up on Astra. Plans for future channels include a classic films channel, a general entertainment channel jointly run by Thames and London Weekend TV, and even a channel carrying the deliberations of the House of Commons (yawn!).

BSB

British Satellite Broadcasting, Astra's main competitor, is the 'official' U.K. satellite broadcaster, in that they are licensed by the IBA. The BSB satellite is more powerful than Astra but only has capacity for five channels. BSB was originally only going to use three of these channels, but because of the much wider choice available on Astra they have now applied to the IBA for permission to use all five. BSB are still waiting, but the answer is expected to be yes.

While Astra uses the PAL system - the same technology as is used in Britain for terrestrial tv - BSB will use the new D-MAC system for its transmissions, which they claim offers potentially better picture quality (if your tv has a direct RGB input via a SCART socket) as well as digital stereo sound. Only four manufacturers have been given permission to produce the special BSB receivers, and they are expected to cost slightly more than Astra kit at about £300.

These are the channels on BSB:

Galaxy Channel

A general entertainment channel - BSB's Sky channel.

Now - The Information Channel

News and documentaries.

The Movie Channel

BSB has bought up the rights to more films than Sky Movies. The channel will be free during the day, when older films will be shown, and charged for after 6pm, with newer films.

The Sports Channel is BSB's planned all sports channel, and **The Power Station** will be a 24 hour music channel, similar to MTV. Both of these channels are presently subject to IBA approval.

The first three channels will go on-air in September, subject to a successful launch. The extra two channels should follow in January 1990. The Astra programmers seem to have the advantage over BSB in terms of program choice. They are also up and running while BSB's satellite is still on the launch pad. Astra has chosen proven technology in PAL, while BSB has opted for a brand new system which is more expensive. The potential better quality of D-MAC will probably only be seen with things like live shows and feature films, and

is only available if you have that all important SCART socket on your tv.

Which will succeed - who knows ? The final result may depend more on the quality and variety of the programs than the technology.

BOOK REVIEW - Z88 COMPUTING by IAN SINCLAIR

This book was in fact the first to become available after the launch of the Z88, and it has a good pedigree to live up to, since its author, Ian Sinclair (no relation to Clive!) has been very prolific over the last few years in writing computer-specific titles. If you were to pick any computer of the 1980's, the chances are that Sinclair has written a book for that machine. The book itself is a paperback, of some 160 pages including a useful index. It is unusual in that rather than adopting the normal layout of a book by having chapters, it is broken down into much smaller Sections within larger Parts. For example, Part 3 - The Diary, has within it 8 sections covering topics ranging from The Active Day to Files. This fragmented structure is certainly novel, and in a book of this type is probably quite effective in getting the information across.

According to the introduction, the aim of the book is to allow the reader to become familiar with the use of the Z88. "Odd", you might say, "but I thought that was what the User Guide was for." And here we hit the proverbial nail on the head, for this book is the User Guide in disguise - or rather the author, realising how difficult the CCL User Guide is to get to grips with, has written a book which reiterates much of the information in

Z88 EPROM - MAY-JUNE 1989

the official guide, but in a way which is much easier to read and understand.

In order to gently ease the reader into its subject, the book initially looks at the simpler aspects of the Z88: The Popdowns, then the Diary, before Introducing PipeDream and then going on to two chapters which cover word processing with PipeDream. The book then covers spreadsheets, a short chapter on the limited database facilities, before going on to printing and the PrinterEd.

The final section covers data transfer, concentrating on transfer to and from an IBM PC or compatible such as the Amstrad PC1512. Finally, there are several useful appendices - one listing all the \diamond commands, one listing the CLI command characters, another explaining scientific notation for numbers, and lastly a list of the Z88's devices.

Is this a book worth buying? The answer really depends on how well you get on with the official User Guide. If you found that it told you all you needed to know, this book is not really for you. If however, like many people, you found the User Guide hard going, and were frustrated when trying to find information you **knew** was there, I think you will find Z88 Computing quite useful. The way the book is laid out, with a very comprehensive table of contents and index, makes information very easy to find.

PRODUCT: Z88 COMPUTING by Ian Sinclair
PRICE: £9.95 (BUT SEE SPECIAL OFFER ON PAGE 5)
PUBLISHED BY: David Fulton Publishers,
2 Barbon Close
Great Ormond Street
London WC1N 3JX
Telephone 01 405 5606

TK

COMPUTERWARE

the Z88stockist

Tel: 0303-81-2801

RAM Packs	32k		20.00
	128k		50.00
	512k		200.00
EPROM Pack	32k		20.00
	128k		50.00
COMPUTER :	Z88		236.00
ADAPTORS:	Z88	- Amstrad PCW (C-Port s/ware)	30.00
		- Archimedes	35.00
		- BBC	25.00
		- Macintosh	60.00
		- Mains	10.00
		- PC 2	35.00
		- QL (BT connector Ser1)	23.00
		- QL ('D' connector Ser1)	25.00
SUNDRY:	Carry Case		10.00
	Centronics Interface		30.00
	Disc Drive 3.5", battery powered with I/Face		275.00
	Eprom Eraser		40.00
	Modem (Miracle)		50.00
	Modem cable		12.00
	RS 232 lead		10.00

MEMBERS' SURVEY

PULL-OUT MEMBERS' SURVEY

This pull-out section of **Z88 EPROM** is a short questionnaire designed to let me know what people like or otherwise about the Club and the contents of its magazine. **YOUR ANSWERS ARE STRICTLY CONFIDENTIAL - ONLY OVERALL TRENDS WILL BE ANALYSED AND PRINTED IN A FUTURE ISSUE.**

To encourage you to fill in and return the questionnaire there is a small incentive in the form of 10 free six-issue subscriptions to **Z88 EPROM**. These will be awarded to the first 10 completed questionnaires to be pulled out of the hat on June 25th 1989. The names of the winners will be in the next issue of **Z88 EPROM**.

Please fill in your answers in **BLOCK CAPITALS** and return the pull-out section to the Club Address on page 2.

NAME:.....

MEMBERSHIP NUMBER:.....

* DELETE THE ANSWER(S) NOT APPLICABLE

Section One - Z88 EPROM

1. Z88 EPROM is currently sent to you six times a year at a cost of £6 (UK). Would you like to see Z88 EPROM published every month for proportionately more money? (ie. 12 issues a year at a cost of £12 (UK))

YES / NO*

2. Advertising is used to subsidise the production

MEMBERS' SURVEY

costs of your Club magazine. Would you say there was too little advertising in each issue, just the right amount, or too much advertising?

TOO LITTLE / JUST RIGHT / TOO MUCH*

3. How do you view the balance of articles in Z88 EPROM? For each of the following would you like to see less, the same, or more of that type of contribution:

Editorial	LESS / SAME / MORE*
Newslines	LESS / SAME / MORE*
Members' Letters	LESS / SAME / MORE*
Software Reviews	LESS / SAME / MORE*
Hardware Reviews	LESS / SAME / MORE*
Articles	LESS / SAME / MORE*
Small Ads	LESS / SAME / MORE*

4. Would you like to suggest anything for inclusion in future issues?

.....
.....
.....
.....
.....

5. Would you be interested in a binder for your issues of Z88 EPROM. A proper magazine binder in PVC with the title blocked on the spine designed to hold 12 issues would cost about £5.

YES / NO*

6. Have you partly or wholly relied on the reviews in Z88 EPROM before choosing and buying software for your Z88?

YES / NO*

MEMBERS' SURVEY

Section Two - Your Z88

1. How long have you had your Z88?

..... yearsmonths

2. Please delete any accessories you do not have:

CASE	32k RAM	128k RAM	512k RAM
MAINS ADAPTER	32k EPROM	128k EPROM	

3. Are there any further accessories you would like to see for your Z88?

.....
.....
.....

4. Have you experienced any hardware problems with your Z88. If so, please give brief details:

.....
.....
.....

5. Please tick any of the following commercial software packages you have for your Z88:

Scrazzble Withered Toad Z-Term

zBASE zTAPE Spellmaster

Harvester Wordchip Finger Organiser

Data Organiser Stopwatches T-Touch

6. What commercial software would you like to see for the Z88:

.....

MEMBERS' SURVEY

7. Which of the following books do you have:

- Z88 Computing BBC BASIC manual
Using your Z88 Z88 Power Computing

8. What books would you like to see for your Z88?
.....
.....
.....

Section Three - Workshops

1. Did you attend the April 1st Workshop?
YES / NO*

2. Would you attend a future Workshop?
YES / NO*

3. That event was held at Long Eaton, junction 25 on the M1. Would you prefer to see a future event held:
FURTHER NORTH / FURTHER SOUTH*

4. Would you prefer a workshop with buffet lunch included (cost £10-£15) or with no food at a lower cost (say £5)?
FOOD INCLUDED / NO FOOD*

Section Four - Your bit!

Please use the space below to make any comments about the Club, the Z88, Z88 EPROM, in fact anything really!

SOFTWARE

GAMES:	Scrabble	Wordmongers	20.00
	Withered Toad	Wordmongers	25.00
TERMINAL:	Z-Term - General purpose	Wordmongers	52.50
	G-Term - Telecom Gold terminal	Wordmongers	52.50
	M-Term - Mercury 7500 terminal	Wordmongers	52.50
GENERAL:	Data Organiser	Harvester	40.00
	Finger Organiser	Harvester	40.00
	Pipedream - Archimedes	Colton	114.00
	Pipedream - PC (3.5"/5.25"d)	Colton	114.00
	Pipedream - PC Spelling Checker	Colton	50.00
	Superchip 2	Wordmongers	100.00
	Superchip 3	Wordmongers	130.00
	Spellmaster	Computer Concepts	59.00
	T-Touch	S & S Computer	40.00
	Wordchip	Harvester	45.00
	Z-Base	Wordmongers	69.00
Z-Tape	Wordmongers	52.50	
BOOKS:	Pipedream	Dabs	15.00
	Z88 Computing	Ian Sinclair	10.00
	Z88 Real Power Computing	F.R. Flaig	12.00
	Z88 Reference Manual	M-Tec	16.00
	Z88 Software Developers Guide	Cambridge Comp.	35.00
	Using your Z88	Patrick Hall	10.00

All prices are in £ sterling and inclusive of VAT @ 15% and UK Mainland delivery by First Class UK post.

● ALL PRICES INCLUDE VAT AND UK MAINLAND DELIVERY - WE EXPORT WORLDWIDE ●

Phone for details of other products OR send SAE for our latest catalogue
Credit card phone orders accepted, or send cheques, postal orders, Eurocheques to:

**TK COMPUTERWARE, STONE STREET,
NORTH STANFORD, ASHFORD, KENT TN25 6DF**

TELEX
966876 PMFAB G



FAX
0303 812892

Does your Cambridge lose its memory in your briefcase overnight?

The Cambridge Topper eliminates those nagging doubts that beset Z88 owners ... has it turned on in my bag? ... will I have to retype all those long files? ... will the display get scratched? ... how can I clean the keyboard?

The Topper is...

- made of impact/scuff resistant ABS
- precision moulded for a snug fit
- firmly rigidized in key areas
- a mere 70 grams in weight
- finished in matching black!

The Topper fits the Z88 precisely, adding no more weight or bulk than is strictly necessary to provide effective protection from accidental operation of the shift keys, and from everyday wear and tear to the face of the machine, completely shielding your keyboard and display from dust and dirt.

Cover the parts that Sir Clive forgot!

For complete peace of mind, get your Topper today -- send £7.75 to:
A GRAY, 49 Olney Road, Emberton, OLNEY, Bucks, MK46 5BU

Wordmongers Ltd.

21 Edison Rd., Rabans Lane, Aylesbury, Bucks. HP19 3TE

Tel.(0296) 437878. Prestel 029634822. Telecom Gold 84:WOT001

It's been a difficult couple of months at Wordmongers. Things started brightly enough with an order for 60 Z-Terms from Australia. "Send them to Sydney", said an Australian with a Chinese accent. "Sidney? Sidney who?" "No no, Sydney. The city in...oh never mind. We'll handle the shipping."

So they arranged all the shipping. Unfortunately, although the package was suitably insured on its 14,000 mile journey from Heathrow to Australia, it was not insured on its 35 mile journey from Aylesbury to Heathrow. The rest of this story is predictable, and the package is probably sunning itself on a Carribean beach, surrounded by dusky maidens.

So after watching 60 32K Eproms disappear down the wotsit, we had to order some more from CC. They were out of stock, and all our dealers chose this moment to order more stocks. After a two week wait, more Eproms arrived and we started processing all outstanding orders.

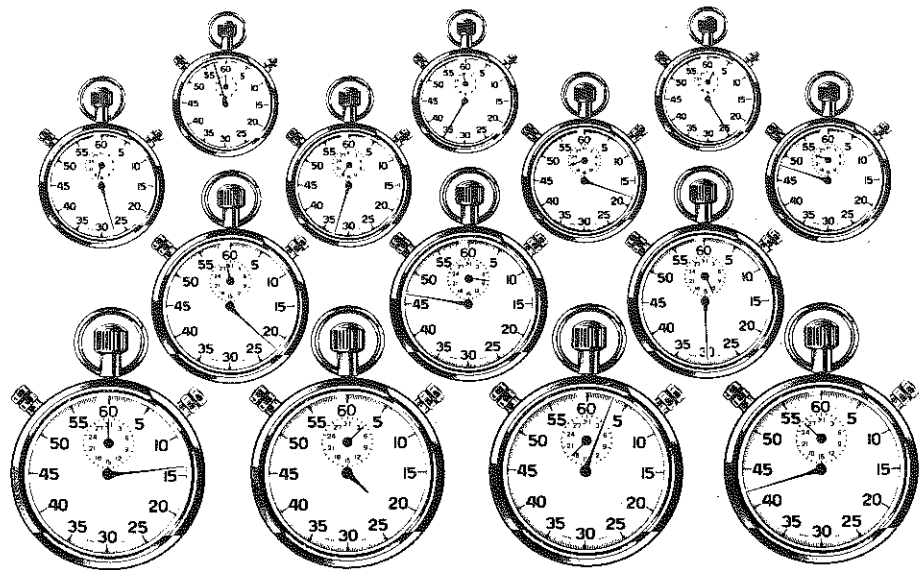
Then we discovered CC, bless them, have taken to checking all Eproms before dispatch, by putting them into Z88's. As we all know, when a Z88 sees a fresh Eprom it instantly puts an Eprom header on it. This Eprom header has to be removed before the Eprom can be programmed as a ROM. I'm sure no Users' Club member has experience of cramming 250 Eproms into 1 eraser, but take it from me, its a very dull way of passing a week.

The third tragedy was the sudden demise of our Amstrad (spit spit) development machine. Fortunately (for us), Tina, our secretary, developed an internal error at the same time. When she returned, she found her prehistoric CPM80 machine had wandered into the PIT (Programming Individuals Territory) and was straining to cope with compilers, assemblers and the like.

Meanwhile, Z-Tape continues to hit the fan. We had a few teething problems with version 1.0. We didn't realise that the AGC controls on different cassette recorders behave in different ways when they hear the initial screech from the Z88. Some nearly jump off their PCBs, others eye the noise and take over a second to decide what to do about it. The software was changed and now copes with all eventualities. Anyone with version 1.0 needn't bother upgrading if they are not having any problems.

Finally, progress on Thinkz is good, despite the antics of Sugar's children. For those who did not attend the User Club day, Thinkz is our next Z88 project. It's a thought organiser, based around most of the ideas/projects organisers available for PC's. Anyone who is not familiar with this type of software should phone us and ask for one of our super-doooper new Z88 software portfolios, which has details of all our Z88 products.

Del



Who says you need fourteen hands?

An application card for the Cambridge Computer Z88

Two hands – one to hold the computer and one to push the keys – are all that are needed to accurately time fourteen competitors using Stopwatches from Racing Car Computers.

And you'll have the benefit of a wealth of information – much more than could ever be gleaned from a handful of chronometers.

The computer displays competitors' names and numbers, current elapsed times, last lap times, total laps completed and sorts the competitors into positions.

It also shows best recorded lap times, split times and times/distances behind the race leader.

Key features of the RCC Stopwatch card are:

- 14 concurrent stopwatches accurate to 1/100th second
- Three modes of operation – Practice, Race and Endurance
- The current mode can be changed as frequently and as often as required
- Practice mode displays best lap times and positions are calculated from these times

- Best lap times are updated even if Practice mode is not selected
- Race mode shows time/distance behind leader and position in the race
- Endurance mode shows time/distance behind the competitor ahead

ALSO AVAILABLE

LAP LOG VERSION

All the standard commands, plus the ability to store, view and print up to 250 laps for each competitor.

£69.50 inc. VAT

- A Snapshot facility may be used at any time to store the state of all the clocks
- Snapshots can be recalled for viewing or printing out
- Up to sixty six Snapshots can be taken in a Z88 fitted with 128K RAM
- A command is provided to start all the clocks together – especially useful if timing

athletic events

- All the Z88's internal software is available for use at any time without affecting Stopwatches
- Over five hundred Stopwatches available in groups of fourteen if extra RAM is fitted
- For timing athletics events, swimming galas, laboratory experiments, sailing regattas, downhill skiing – or even motor racing!

ROM software card for Z88, manual, keystrip – £49.50 inc.



Available now from
RACING CAR COMPUTERS

1 Mulberry Cottage, Tye Green, Elsenham, Bishop's Stortford, Herts. CM22 6DZ

Tel: 0279 812496

(Dealer enquiries welcome)



S & S COMPUTER ADVICE

8 Anchor Close, Hathern, Leics., LE12 5HP
Tel: (0509) 842670

T-TOUCH

As featured at the first 'Z88 EPROM USER' Workshop.

A special course and software program for self-learning to touch-type on the Z88. Carefully planned and tested by experts in psychology, ergonomics and education. £39-95 inc. vat and postage.

FORM 7 Administration Database

Our latest project is a suite designed for use with 'zBase' from Wordmongers.

This suite will be of particular use to Primary Headteachers and Teachers.

We are inviting members of the User Club who are in the Teaching Profession to help Beta-test this product.

Participants will need a copy of 'zBase' in order to help and be willing to purchase from us the 128k eprom complete with the FORM 7 suite for the basic eprom price of £49-95.

If you are interested please contact Bob Shore for further details.

New products

The Z88 has yet to achieve its enormous potential for use in education establishments. This is partly due to the lack of good software.

We are always looking for marketable programs particularly for education.

If you have designed an educational program for the Z88 we would be pleased to hear from you.

Help

If you need it for your Z88 we can supply it.

Hardware. Software. Training. Advice.

All from:

S & S Computer Advice

The 'Z88' in education specialists.

PipeDream

PipeDream is now available for the IBM PC and compatibles, and the Acorn Archimedes. It has been completely rewritten for these computers and contains many new facilities, whilst retaining complete file and keyboard compatibility with the Z88.

PipeDream on the PC or Archimedes makes the ideal companion for your Z88. With just a connecting lead and the PC LINK II EPROM you can load files directly from the Z88 filing system into PipeDream on the other computer and continue working with no loss of information. Now you can use PipeDream on the computer in your home or office as well as using it in the Z88.

New features of PipeDream on the PC and Archimedes include:

- ◆ up to 8192 columns and over 500,000,000 rows (depending upon your computer's memory size)
- ◆ mail-merge
- ◆ function keys
- ◆ complete keyboard reprogrammability
- ◆ foreign character editing and printing
- ◆ linking files
- ◆ financial functions
- ◆ database functions
- ◆ LOTUS file load and save
- ◆ user defined colour displays

PipeDream for the IBM PC and PipeDream for the Acorn Archimedes costs £99 + VAT.

For more information or to order PipeDream call us on 0954 211472 or write to us at Colton Software, Broadway House, 149-151 St Neots Road, Cambridge CB3 7QJ. Access and VISA telephone orders welcome.

PipeDream - power at your fingertips



For the Z88

B

ased on one of the most successful programs for the BBC Micro, SPELLMASTER has now been re-written for the Z88. Supplied as a plug-in ROM cartridge, it can be permanently available - there is no loading of programs from disc etc.

Using the built-in editor SPELLMASTER provides check-as-you-type combined with fast and simple text entry. Other features include:

- A dictionary of almost 60,000 words built into the ROM.
- Optimised English dictionary - not American English.
- User extension dictionary allows this number to be extended.
- User dictionary may be edited, like normal text.
- User dictionaries can be saved and loaded to and from file or other computers, as ASCII files.
- Fast word search, available as a pop-up from within any Z88 program, that searches through the ROM for any of the following:
 - Words that sound like the one specified.
 - Words that are spelt approximately like that specified - this is ideal for guessing mistyped words.
 - Words that have one or more letters missing (solves crosswords).
 - Words that have the correct letters, in the wrong order (solves anagrams).
- Browse through the dictionary.
- Built-in text editor. A simpler more straightforward text editor than Pipedream. This editor offers the following:
 - Fast scrolling.
 - Read and write Pipedream text files.
 - Block delete, move and copy.
 - Insert or Overwrite modes.
 - Pipedream like deletes - back forward, word, line etc.
 - logical standard editing features, i.e. words wrap as you type, lines can be split by pressing RETURN at any point, lines may be joined by deleting back from the line start.
 - Check-as-you-type, without slowing down typing.
 - Spell check entire text at 8000 words per minute.
 - Check word at cursor.
 - Check text from cursor onwards.

The real use of SPELLMASTER is not always in correcting spelling mistakes. Few people are expert typists, especially on a lightweight portable such as the Z88. SPELLMASTER can detect typing errors just as easily as spelling mistakes and can ensure that text entered on the Z88 is correct before it is downloaded to other computers.

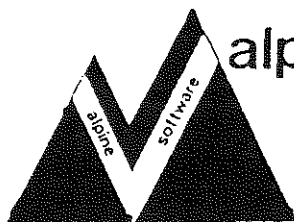
SPELLMASTER is more powerful, and certainly more convenient, than many spelling checkers provided on larger micros.

Price £51.30 + VAT (£59.00 incl.)



Computer Concepts Ltd

Gaddesden Place Hemel Hempstead Herts HP2 6EX. Telephone 0442 63933



alpine software

Z88 Computer....£199	PC Link II..£30	Parallel Cable..£25
32K RAM / EPROM..£17	BBC Link...£22	Serial Cable..£8.70
128K RAM / EPROM.£42	MAC Link...£49	Mains Adaptor.£8.70
512K RAM.....£165	QL Link....£20	Carry Case....£8.70
EPROM Eraser.....£33	Archimedes..£25	ST Link.....£18

Special Gift Pack.....£240 MACLITE Pack.....£275

Mains / Battery portable 80-column Thermal Printer....£120
Dataflex Pocket Stradcom Modem.....£189
Superchip - ZBase, Z-Term, Withered Toad, Scrazble....£89
Superchip III - ZBase, Z-Term, Z-Tape.....£99

ZBase.....£57	Spell Master v1.03.....£47
Withered Toad.....£19	T-Touch Typing Tutor....£40
Z-Term.....£39	Finger Organiser.....£33
Z-Tape.....£39	Data Organiser.....£42
	Wordchip Spellcheck.....£42

All prices are subject to 15% VAT. Post & Packing FREE.
ACCESS and VISA welcome.

If you cannot see what you want, please telephone any time, evenings and weekends too; and we should be able to get it for you at the best possible price. We also sell IBM PC compatible software and will be glad to give you a very competitive quote. We hold thousands of pounds worth of Z88 goods and normally despatch immediately on receipt of order.

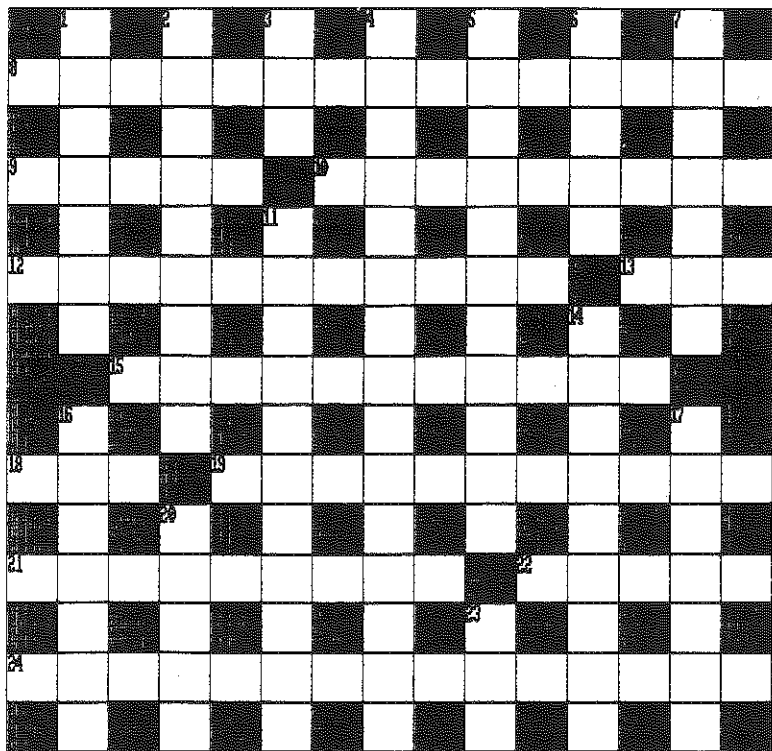
ALPINE SOFTWARE

21, GIRTON ROAD, NORTHOLT, MIDDLESEX UB5 5SR



TELEPHONE: 01-864 0408





THE CROSSWORD

2

by David Axford (1295)

ACROSS.

8. Z88 is a genuine one of these(6, 9) 9. Relative indicator popdown(5) 10. Fantasy induced by opium or a wish come true?(9) 12. Surgical treatment of the skeletal system(11) 13. Period which someone has existed(3) 15. Funds in a healthy condition(1, 5, 5) 18. 0 or 1(3) 19. Forecasting system(11) 21. An appendage(9) 22. Journal of a Z88(5) 24. Z88 model of excellence(9, 6)

DOWN

1. Wild duck - a type of BASIC(7) 2. Capital built on islands in the Baltic sea(9) 3. Copy a gorilla(3) 4. Attention drawn to message in teleprinter!(6, 5, 4) 5. Gastroenteritis or just a domestic upheaval?(5, 6) 6. Load up(5) 7. It sort of ran in gear(7) 11. An apt word(11) 14. A nice latch made with practical knowledge(9) 16. Competition between different groups(7) 17. Coloured woman on A30?(7) 20. Cells? Not the Z88!(5) 23. Fading away(3)

ANSWERS TO CROSSWORD NUMBER 1

ACROSS:

8. FORMATPARAGRAPH 9. BUTTON 10. AUTOBOOT 11. BEEP 12. SETTEE
15. STAG 16. EPROM 17. OKAY 18. NIBBLE 21. NAME 24. LIBRETTO
25. DVORAK 26. CUTPRICEPRODUCT

DOWN:

1. DOCUMENTS 2. EMPTYPAGE 3. STANDS 4. VACANT 5. LASTREAM 6. BRIBE
7. EPSON 13. DOWNLOADS 14. WARMPATCH 16. EDITTHIS 19. BROKEN
20. ENDURE 22. VIRUS 23. GRAPH

BASIC FOR BEGINNERS

by Geoff Cooper (CCL)

Roy has suggested that I write a series of articles on the subject of BASIC programming for the complete novice, as such people have been uncatered for in the past.

I shall assume that you have never written a BASIC program in your life, but hope that those of you who have will bear with me and perhaps find future articles of interest.

First, how did BASIC come about, and why is it always written in CAPITAL LETTERS ?

Back in the dim and distant history of computing, it was always the boffins who created and programmed their own machines - the languages used were complete gobbledegook to the layman. As computers became more widespread, and people wished to use them who weren't trained in these strange languages, it became apparent that what was needed was a computer language which was easy to learn, and was like English in structure, so that it could be learnt by anyone. BASIC was born.

BASIC is always written in CAPITALS because it is actually an acronym for **B**eginners **A**ll-purpose **S**ymbolic **I**nstruction **C**ode. Over the years BASIC has become the most widely used and understood computer language, and this is the reason it was included as part of the Z88's inbuilt software.

One other important thing to say before we start to explore BASIC - there are many versions (or dialects) of the language used on different computers. The core of the language is invariably

the same, and in each dialect extra commands are added to take advantage of the facilities offered by each computer.

To start with, it is important to have your Z88 by you as you read this, so that you can try examples for yourself. this is the only way to learn to program.

To start BASIC, press: B
and you will see a prompt: >
This tells you that the computer is waiting for you to ask it to do something.

Type this: **INPUT NAME\$** <ENTER>
note that <ENTER> means that you should press the key marked ENTER, not type the letters. ENTER (sometimes called RETURN on other machines) indicates to the Z88 that you have finished your part of the conversation and that you now want the computer to respond.

Note that most of the time the case you use to type into BASIC **does** matter - make sure that the word CAPS shows in the bottom right hand corner of the display.

BASIC will reply with: ?
This does not look very promising, unless we consider what we have typed. As you might guess, INPUT means "accept some data from the user" - in this case, a name. Whatever we reply will be held in the **variable** called NAME\$. Think of a variable as a letterbox, holding some data, say a number or a word. We can change the contents of this box at will, so the contents are **variable**. We called our variable NAME\$ - we could have called it almost anything, but as it will be storing someone's

name, ours was an obvious choice, Anyone reading the program would guess what purpose it served. The \$ symbol means "string", and tells the Z88 we are wanting to enter a word (a string of letters) rather than a number.

Reply to the computer with: **FRED <ENTER>**
and the Z88 responds with: **>**

Now type the following: **PRINT "HELLO ",NAME\$**

From now on I will omit the <ENTER>. Just remember that whenever you have finished issuing a command to BASIC you must press <ENTER>.

You will now see: **HELLO FRED**

>
The command **PRINT** tells the computer to put whatever follows up on the screen. If, as above, you tell it to print a variable, then it will print the contents of that variable to the screen, in this case "FRED".

If at any time you see: **MISTAKE** or some other unexpected reply, just try typing in the line that failed again. It is important that you type everything exactly as shown.

Note that text **MUST** be enclosed within quotation marks. If we had not done so above the Z88 would have thought the word **HELLO** was a variable, and tried to print the contents of **HELLO** even though we had not stored anything there.

On the other hand **NAME\$** should not be in quotation marks, otherwise the Z88 will treat this as text and not as a variable.

It's all very well being able to type in these commands one by one for the computer to execute, but it is not really a lot of practical use. To make BASIC useful we need to be able to write sequences of commands, or programs, which are not carried out until we tell the Z88 to do so.

```
Type: 10 PRINT "THIS IS MY FIRST BASIC PROGRAM"
```

The line number, 10, tells the computer not to carry out the instruction immediately. Now type:

```
20 INPUT NAME$
30 PRINT "HELLO ",NAME$
```

Our three lines of instructions are now held in memory, and if you now type: RUN
the computer will execute them in number order.

Now let's demonstrate a "loop":

```
40 GOTO 20 then type: RUN
```

When you become bored pres the <ESCAPE> key (top right) to leave the program.

If you type: LIST you will see the lines of your program listed. Now let's try some decision making. Type:

```
40 INPUT "AGAIN (YES/NO) ?"REPLY$
50 IF REPLY$="YES" THEN GOTO 20
```

You can save your program for use at another time. The command for this is SAVE "PROGNAME" where PROGNAME is whatever name you want to give the program.

To load a saved program back into memory use: LOAD "PROGNAME" followed by LIST to list it or by RUN to run it. There is also a command which

will both load and run a program, this is:
CHAIN "PROGNAME"

Now we understand what a program is, let's try something a little more impressive: Suppose we want to find the average of a number of values.

Before typing in another program, we must clear out the old one using the command **NEW**. Then type

```
10 total=0:count=0
20 INPUT "Please enter a value, or press 0 to
finish..."value
30 IF value=0 THEN GOTO 60
40 total=total+value:count=count+1
50 GOTO 20
60 average=total/count
70 PRINT "AVERAGE IS..."average
```

I hope you can see how this works. Note the use of **GOTO**. This word may seem very useful, but as we will see in future articles there are alternatives which make it very much easier to follow the flow of a program, especially as the program gets larger.

You will notice that we are using a value of 0 to exit from our loop. This can cause problems, since 0 may be one of our values. Try modifying your program such that a negative number will cause an exit from the loop, and then again so that exit is caused by a very large number, say 9999. You will need to tell the user at the start of your program how to indicate that all the data has been entered.
More next time, and happy programming!

ACCESSORY REVIEW - THE CAMBRIDGE TOPPER

The Cambridge Topper is one of those products that immediately make me say; "Now why didn't I think of that?" Alex Gray, the man who did think of it, has executed his simple idea to produce a very neat plastic cover for the top of the Z88. This cover is light (about 70 grams) and made of thin polystyrene plastic, vacuum formed to shape.

The design has been carefully thought through - the cover is just the right size to hold itself in position by lightly gripping the edge of the Z88's rubber keymat. There are raised portions over the two shift key positions, and over either end of the display area. In the middle of the display area the letters "Z88" are embossed into the plastic, adding both a neat identifier and rigidity to this part of the cover.

What else can you say about a plastic cover ?

In conclusion, what I will say is that I consider my Cambridge Topper invaluable protection for my Z88. Even if you keep your computer in a carrying case, (and especially if you use the official CCL 'flimsy' case, which offers next to no protection) the Topper will do two things:

It provides physical protection, especially needed around the display area (a new display costs about £100 fitted!) and keeps the keyboard clean; it stops things pressing onto the keys when the machine is switched off - this causes a higher standby power to be drawn, shortening battery life.

I am now ordering one for my second machine. Need I say more ?

Z88 EPROM - MAY-JUNE 1989

PRODUCT: THE CAMBRIDGE TOPPER
PRICE: £7.75 including p&p
FROM: AGRAY, 49 OLNEY ROAD, EMBERTON, OLNEY,
BUCKS. MK46 5BU.

SOFTWARE LIBRARY UPDATE

by Ian Braby, our Software Librarian

There's a bumper crop of new programs for the Library this month - including 12 from the American Club Z88 which were gratefully received, especially the Comms program, I'm sure!

Some of the programs are duplicates of earlier one - so why have them both, you may ask! A valid query, but I feel that we can all learn by looking at how two minds tackle the same problem.

The Library has certainly grown recently; so far, in fact, that they are now kept on 4 128k EPROMs and on a QL disk! This means that requests from QL owners may well be dealt with first if they supply mdv or 3.5" disk (or 5.25" disk, even!) simply because it's quicker to copy from disk than it is to load everything into the Z88 and then blow EPROMs!

And on the subject of media: programs can now be supplied on the following:

QL mdv, 3.5" disk or 5.25" disk
PC 5.25" (360k) disk or 3.5" (720k) disk
Atari ST 3.5" SS or DS disk, or 5.25" disk
Z-Tape (many thanks to Wordmongers for a copy!)

A word concerning requests: For one, please don't all ask for programs as soon as you've read this - it'll only lead to delays!

Z88 EPROM - MAY-JUNE 1989

PLEASE, PLEASE, PLEASE include your membership number. I'm thinking of putting the library list on some bulletin boards by way of convenience and advertising so to ensure the programs only reach bona fide members I shall reject requests which do not include your number!

If you want your EPROM erased, the fee is 50p (5FFr or DM2) **cash** (or 2 International Reply Paid Coupons) plus return postage!

If you wish to have your EPROM/etc. returned by Registered post, please include a new return envelope - the Post Office refuses re-used Jiffy bags! Overseas Members: please use International Reply Paid Coupons for your return postage.

And now for some updates....

Z007 & Z016 now both contain v2.1 of Richard's Patch which uses :RAM.0 files instead of :RAM.-.

Z028 EFETCH - a new version (v3.3) which can handle more than 30 entries.

An admission of guilt:

Z047 Z88fax - this totals 23k, not 17.5k - sorry!

And the new programs...

Z048 User Defined Character Editor by Michael Hey (0703). Allows you to define characters on-screen and reports to VDU string you need to use in your own program. Complete with demonstration & documentation. (10.5k total).

A=program

B=documentation

C=demonstration program.

Z88 EPROM - MAY-JUNE 1989

- Z049-60 Twelve programs from Club Z88, USA
- Z049 LISTER.BAS (1k) - lists ASCII (CLI) BASIC files in a structured format.
- Z050 ELOAD.BAS (2.5k) - US version of Z028.
- Z051 Z88COM.BAS (19k total) - An excellent BASIC & m/c extension to the Z88's built-in Terminal, offering XModem up/down-loading, autodial & auto-log-on with Hayes modems.
A=Program
B=Example log-file (rename to PHONE.LOG)
C=Documentation
- Z052 FADDER & DETAB (6.5k total) - an LF-adder and a TAB-remover for ASCII files. BASIC & m/c.
A=FADDER
B=DETAB
C=Documentation
- Z053 Deleted!
- Z054 EPCAT.BAS (2.5k) - US version of Z027
- Z055 FILDMP.bas (1k) - US version of Z026
- Z056 DISZ88 (13k total) - an enhanced Z88 Disassembler based on that published in Z88 EPROM.
A=Program
B=Documentation
- Z057 DECIDE.BAS (3k) - a decision-making program.

Z88 EPROM - MAY-JUNE 1989

- Z058 FINANCE.BAS (5k) - a financial analysis program.
- Z059 MAXIT.BAS (4k) - a "screen-orientated" game!
- Z060 WIZARD.BAS (22k total) - an adventure game by Chris Fenn
A=Program
B=Documentation
- Z061-3 Three programs by Dr.Bruno Pellaud (1339)
- Z061 FINANCE (5k) - a program for simple financial calculations with compound interest and annuities.
A=Documentation
B=Program
- Z062 INVEST (4.5k) - a program for assessing the profitability of an investment.
A=Documentation
B=Program
- Z063 LINPROG (10K) - a program for solving linear programming problems of any kind
A=Documentation
B=Program
- Z064 LASER-PRINTER DRIVER - (2.5k) Further to Steve Butterworth's efforts for the H-P DeskJet, I've done the same for the H-P LaserJet!
A=Standard Printer Driver
B=Spreadsheet Printer Driver
C=Documentation

Z88 EPROM - MAY-JUNE 1989

- Z065 DISTBEAR - by Richard Newstead
(1391)(3.5k). A BASIC program which
will, given Ordnance Survey
co-ordinates, calculate distance and
bearing for you. A must for budding
orienteers!
- Z066-7 Two programs by Simon Phipps (0221)**
- Z066 User Defined Character Editor (27k total)
- an excellent utility which produces VDU
statements to merge into your own BASIC
programs, or zBase character files.
 A=Documentation
 B=Program
 C=Character file. Rename as UDC.TXT
 D=Example file. Rename as ALPHABET.UD
 E=Example file. Rename as CARDS.UDC
- Z067 zFormat.Bas (3k total) - Indents your
zBase program listings to make them more
legible.
 A=Documentation
 B=Program
- Z068-70 Three programs from Micro User typed by
Simon**
- Z068 BreakThru (3k) - Breakout-type game
- Z069 Patience.Bas (5k total) - A game of
patience tidied up by Simon.
 A=Documentation
 B=Program
- Z070 BridgeIt.Bas (3.5k) - Play against the
computer in a contest of join-the-dots!

Z071 TASFIX - a suite of programs from Les Waters (1497) which correctly converts PipeDream files into PC-Tasword format. Also includes: TASDBL - Tasword double-space fix TASLINE & TASUNLINE - adds and removes line numbers from Tasword files.

(Only available on PC disk)

Z072 CLOCK.BAS - (5k) by Peter Lewis (0771) - turns your Z88 into a large digital clock!

Z073 EPROMSTAT - (1.5k) Mark Stevenson's (0716) program from the last issue of Z88 EPROM.

SMALL ADS AND SWAPSHOP

****FOR SALE****

COMPUTER CASSETTE TAPES. SECOND HAND (HELD EDUCATIONAL PROGRAM). 10 FOR £3.90 INC. POSTAGE. SEND CHEQUE TO: CHRIS CARTER, 73 OLDFIELD ROAD, SHEFFIELD, S6 6DU. TEL: 0742 340173.

****FOR SALE****

Z88 COMPUTER, 128K EPROM, 128K RAM, 2 X 32K EPROMS, 32K RAM, ALSO SPELLING CHECKER CARD, MAINS PSU, EPROM ERASER, 2 CASES, BOOK AND CLUB MAGAZINES FOR £350 ONO - MAY SPLIT. TELEPHONE 0408 21870 (SCOTLAND)

****FOR SALE****

128K RAM CARD, NEW UNUSED, £40 OR EXCHANGE FOR 128K EPROM. PHONE T. THOMSON ON 03552 65212.

****WANTED****

PC LINKII INTERFACE TO IBM PC £20, ALSO 2 X 128K RAM, £35 EACH. PHONE MICHAEL NG 01 386 7467 (EVES)

Z88 EPROM - MAY-JUNE 1989

****FOR SALE****

1954-1974 ISSUES OF PRACTICAL ELECTRONICS AND PRACTICAL WIRELESS. COMPLETE VOLUMES IN BINDERS, CAREFULLY PRESERVED. ON HOLIDAY IN DORSET THIS YEAR? PHONE JOHN ASTON ON 0305 852276

****FOR SALE****

Z88 WITH TWO 128K RAM, MAINS PSU, SERIAL AND PARALLEL PRINTER CABLES, ALL AS NEW - £250 ONO
PHONE ROBERTS ON 051 428 9449

****FOR SALE****

Z88 COMPUTER - 6 MNTHS WARRANTY, 2 X 128K RAM, 32K EPROM, CASE, MAINS PSU, PARALLEL PRINTER CABLE, INTERFACE, 2 BOOKS - £250. ALSO SHARP PC1500 PLUS INTERFACE, PRINTER, PROG MEMORY MODULE, 2 MANUALS, MAINS/BATT - £100. ALSO C-PORT Z88-AMSTRAD PCW IMPORT/EXPORT UTILITY, UNUSED - £18.

PHONE DR. SHADBOLT ON 0623 34865

****FOR SALE****

Z88, MAINS PSU, CASE, 128K EPROM, 512K RAM, 5 CELL PACK, EPROM ERASER, ALL 6 MONTHS OLD, OFFER PLEASE TO CHRIS MENNIE ON 01 575 5757 X263 OFFICE HOURS.

****FOR SALE****

32K RAM £10 - RING PAUL BRIDLE GLOUCESTER 21550

****WANTED****

FOR PRIVATE COLLECTION - ANY OLD SINCLAIR PRODUCTS UP TO ZX80. WRITE TO ROY AT CLUB ADDRESS ON PAGE 2

STOP PRESS: An unwanted space crept into the listing of the EPROM space program in the last issue, stopping the program at line 470. The space between (FN_RDBYTE and (CADDR, is the one which should be deleted. The program then works.

NEXT ISSUE OUT MID JULY

ALL CONTENTS (C)1989 Z88 USERS' CLUB

ALL TRADEMARKS ACKNOWLEDGED